इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”
Mazdoor Kisan Shakti Sangathan
“The Right to Information, The Right to Live”

“पुराने को छोड नये के तरफ”
Jawaharlal Nehru
“Step Out From the Old to the New”

IS 9243-1 (1987): Method of test for wrist watches, Part 1: Antimagnetic [PGD 23: Horology]

“ज्ञान से एक नये भारत का निर्माण”
Satyanarayan Gangaram Pitroda
“Invent a New India Using Knowledge”

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”
Bhartṛhari—Nītiśatakam
“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

UDC 681·114·8-758·38:620·1

IS : 9243 (Part 1) - 1987

Indian Standard

(Reaffirmed - 2012)

METHODS OF TEST FOR WRIST WATCHES

PART I ANTIMAGNETIC

(First Revision)

Horology Sectional Committee, EDC 82 [Ref: Doc: EDC 82 (4290)]

1. Scope — Lays down the antimagnetic properties of wrist watches for general use and specifies the method of test for the verification of these properties.

1.1 This standard is meant for product confirmation test and not for checking each individual watch in production since the test may cause alteration in the rate of the watch necessitating readjustment even if the minimum requirements have been satisfied.

2. Definitions

2.1 *Antimagnetic* — A watch bearing mention 'antimagnetic' or any other similar term, shall comply with the minimum requirements specified in **4**.

2.2 *Rate* — The instantaneous time keeping accuracy, that is, likely gain or loss over a duration of 24 hours of the watch, measured with the use of chrono-comparator (timing machine).

2.3 *Residual Effect* — The greatest difference of rates observed under the conditions specified in **3.3.1** and **3.3.3**.

3. Method of Testing

3.1 *Test Conditions*

3.1.1 A wrist watch shall be tested without the bracelet, unless the latter forms an integral part of the watch.

3.1.2 During the whole test period, the ambient temperature shall be between 18 and 25°C and shall not vary by more than 2°C.

3.1.3 The apparatus used shall produce a homogeneous and continuous magnetic field whose intensity and directions are indicated in **3.3.2**.

3.2 *Procedure*

3.2.1 Place the watch on the apparatus.

3.2.2 Successively and progressively connect and disconnect the three magnetic fields specified in **3.3.2**.

3.2.3 Carefully withdraw the watch.

3.3 *Operation*

3.3.1 *Checking of rate before magnetization* — Sixty minutes after it has been fully wound for mechanical watches and after one hundred and twenty minutes of function for quartz watches, rate of the watch shall be checked for at least one minute in position DU (dial up) for mechanical watches and in position DU or DD (dial down) if it is a quartz watch.

3.3.2 *Magnetization* — Subject the watch in position DU (for mechanical watches) or in position DU or DD (for quartz watches) to a continuous magnetic field of 60_{-5}^{0} oe or 4800_{-400}^{0} A/m (admitted variation ± 1 percent) during three successive periods of 60 seconds each.

3.3.2.1 In the first period, apply the magnetic field perpendicularly to the plane of the watch, in the 'dial-movement' direction (*see* Fig. 1).

3.3.2.2 In the second period, apply the magnetic field parallel to the plane of the watch, in the direction 6 'O' Clock → 12 'O' Clock. (*see* Fig. 2).

3.3.2.3 In the third period, apply the magnetic field parallel to the plane of the watch in the direction 3 'O' Clock → 9 'O' Clock (*see* Fig. 3).

Adopted 8 April 1987	© November 1987, BIS	Gr 1

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

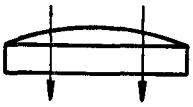

FIG. 1

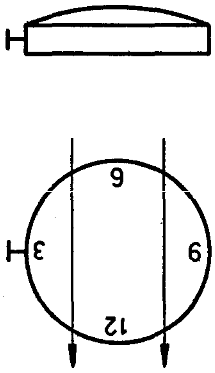

FIG. 2

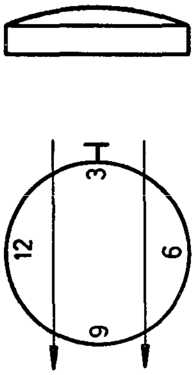

FIG. 3

Note — For quartz analog watches, one of the tribedral axes shall be that of the crirical direction, which is direction over which maximum sensitivity is observed.

3.3.3 *Checking of the rate after magnetization* — Fifteen minutes after the watch has been exposed to the last magnetic field, rate shall be checked for at least one minute in position DU for mechanical watch and in position DU or DD for a quartz watch.

4. Minimum Requirements

4.1 The watch meets the requirements, if:

a) it shall not stop during any of the three periods of 60 seconds indicated in **3.3.2**;

b) the residual effect shall not exceed the values given below:

Type of Watch	*Residual Effect* s/d (second/day)
Mechanical	
1) casing diameter exceeding 20 mm	⩽ 30
2) casing diameter not exceeding 20 mm	⩽ 45
Quartz	⩽ 1·5

5. Marking — The wrist watches, which satisfy the minimum requirements laid down in **4**, may be marked with the term 'antimagnetic'.

EXPLANATORY NOTE

The methods of test for determining the 'shock' and 'water resistant' properties of the wrist watches have been covered separately.

This standard was first issued in 1979. In this revision, the test requirements of quartz watches have also been included. While preparing this standard, considerable assistance has been derived from the following:

ISO 764-1984 Antimagnetic watches for general purpose use. International Organization for Standardization.

NFS 81-5-0 Ordinary antimagnetic watches. Association Francaise De Normalisation.

DIN 8309-1977 Antimagnetic properties of watches, definition, requirements, verification. Deutsches Institut fur Normung.

Printed at Britannia Calendar Mfg Co, Calcutta, India